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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SUSTAINED IMPROVER OF MUSCULAR FATIGUE

(57) Abstract: A long-acting improver of muscular fatigue characterized by comprising 4 kinds of amino acids made up of leucine, isoleucine, valine and glutamine, and a whey protein component (whey protein and/or decomposition product of whey protein). At least one of a whey protein isolate (WPI), a whey protein concentrate (WPC),  $\beta$ -lactoglobulin, and  $\alpha$ -lactalbumin is used as the whey protein. Novel food or drink, and pharmaceuticals which exhibit sustained recovery effects on muscular fatigue are provided.

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# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP 03/15429

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23L1/305 A23L2/66 A61K38/04 A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23L A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, FSTA

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | US 4 687 782 A (BRANTMAN EUGENE R)<br>18 August 1987 (1987-08-18)<br>claims 1-24; example 1  | 2-16                  |
| Y          | FR 2 758 243 A (AJINOMOTO KK)<br>17 July 1998 (1998-07-17)<br>claims 1-10  | 1-16                  |
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| A          | WO 00 64283 A (WHITE PHILIP)<br>2 November 2000 (2000-11-02)<br>page 11; claims 1-10   | 1-16                  |
| -/--       |  |                       |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

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## INTERNATIONAL SEARCH REPORT

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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|--|--|-----------------------|
| Category *   | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| A  | DATABASE WPI<br>Section Ch, Week 199632<br>Derwent Publications Ltd., London, GB;<br>Class B05, AN 1996-316268<br>XP002271047<br>& JP 08 140628 A (MEIJI MILK PROD CO LTD),<br>4 June 1996 (1996-06-04)<br>abstract<br>---                     | 1-16                  |
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/JP 03/15429

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claim 16 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/JP 03/15429

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s)   | Publication<br>date  |
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